

**AMENDMENT TO THE CLAIMS:**

The following claim set replaces all prior versions, and listings, of claims in the application:

1. (currently amended) An artificial turf system which comprises ~~Use of a~~ vulcanised thermoplastic elastomer or styrene-ethylene-butadiene- styrene polymer (SEBS) as infill material ~~in artificial turf systems.~~
2. (currently amended) The artificial turf system ~~Use of a vulcanized thermoplastic elastomer or SEBS~~ according to claim 1 in the form of ~~as~~ infill material in artificial grass.
3. (currently amended) The artificial turf system ~~Use of a vulcanized thermoplastic elastomer~~ according to claim 1, wherein the vulcanised thermoplastic elastomer comprises a polyolefin and a rubber, and wherein the rubber is dynamically vulcanised by the use of a curing agent.
4. (currently amended) The artificial turf system ~~Use of a vulcanized thermoplastic elastomer~~ according to claim 3 wherein the polyolefin is chosen from polyethylene or polypropylene and the rubber is chosen from ethylene-propylene-diene terpolymers (EPDM) or ethylene-propylene copolymers (EPM).
5. (currently amended) The artificial turf system ~~Use of a vulcanized thermoplastic elastomer~~ according to claim 3, wherein the rubber is dynamically vulcanised by a curing agent chosen from sulfur, sulfurous compounds, metal oxides, maleimides, phenol resins, silanes or peroxides.
6. (currently amended) The artificial turf system ~~Use of a vulcanized thermoplastic elastomer~~ according to claim 5, wherein ~~characterised in that~~ the rubber is dynamically vulcanised by a peroxide.

7. (currently amended) The artificial turf system ~~Use of a vulcanized thermoplastic elastomer~~ according to claim 3, wherein the rubber is vulcanised to a gel content higher than 70%.
8. (currently amended) An athletic field surface which comprises the artificial turf system ~~Use of a vulcanized thermoplastic elastomer or SEBS~~ according to ~~claims 1 for~~ claim 1, wherein the athletic field surface is chosen from soccer fields, hockey fields or tennis ~~[[fields]]~~ courts.